

What is claimed is:

[1] An organic electronic and opto-electronic device with a first part and a second part comprising:

- A first substrate with a first electrode;
- A first organic semiconductor material layer; said first substrate, said first electrode and said first organic semiconductor material forms said first part of said organic electronic and opto-electronic device;
- A second substrate with a second electrode;
- A second organic semiconductor material layer; said second substrate, said second electrode and said second organic semiconductor material forms a second part of said organic electronic and opto-electronic device.

[2] An organic electronic and opto-electronic device with a first part and a second part as defined in Claim [1], wherein said first organic semiconductor material layer in said first part of said device has the same chemical composition as the chemical composition of said second organic semiconductor material layer in said second part of said device.

[3] An organic semiconductor device with a first part and a second part as defined in Claim [1], wherein said first organic semiconductor material layer in said first part of said

device has a different chemical composition as the chemical composition of said second organic semiconductor material layer in said second part of said device.

[4] An organic electronic and opto-electronic device with a first part and a second part as defined in Claim [1], wherein said first organic semiconductor material layer in said first part of said device and said second organic semiconductor material layer in said second part of said device are accordingly selected to have the functionalities the said device required. Said functionalities may include hole injection, hole transporting, electron blocking, light emitting, electron-hole combination, electron transporting, hole blocking, electron injection, and others.

[5] An organic electronic and opto-electronic device with a first part and a second part as defined in Claim [1], wherein said first electrode has at least one layer, with said layer contacting said first organic semiconductor and having a low work function.

[6] An organic electronic and opto-electronic device with a first part and a second part as defined in Claim [1], wherein said second electrode has at least one layer, with said layer contacting said second organic semiconductor and having a high work function.

[7] An organic electronic and opto-electronic device with a first part and a second part as defined in Claim [1], wherein one or both of said first and second substrates is optically transparent.

[8] An organic electronic and opto-electronic device as defined in Claim 1, wherein said organic electronic and opto-electronic device being selected from a group of: organic light emitting diode, organic thin film transistor, organic solar cell, organic photodiode, organic memory chip, organic electronic circuit, and organic sensor.

[9] A method to fabricate an organic electronic and opto-electronic device comprising

- Preparing a first part with at least a layer of a first organic material containing a first polymerisable group
- Preparing a second part with at least a layer of a second organic material containing a second polymerisable group.
- Bonding said first part to said second part under an environment with controlled parameters.

[10] A method to fabricate an organic electronic and opto-electronic device as defined in Claim [9], wherein said first polymerisable group is the same as said second polymerisable group.

[11] A method to fabricate an organic electronic and opto-electronic device as defined in Claim [9], wherein said first polymerisable group is different from said second polymerisable group.

[12] A method to fabricate an organic electronic and opto-electronic device as defined in Claim [9], wherein said first polymerisable group and said second polymerisable group

are selected from a group of alkyl, acrylate, epoxy, vinyl, vinyl ether, oxethane, acrylonitrile, urethane, amino, hydroxyl, halide, isothiocyanate, isocyanate, nitrile, or a mixture of at least two of the above.

[13] A method to fabricate an organic electronic and opto-electronic device as defined in Claim [9], wherein said bonding of said first part and said second part is achieved by cross-linking between said first polymerisable group and said second polymerisable groups.

[14] A method to fabricate an organic electronic and opto-electronic device as defined in Claim [9], wherein said controlled parameters of said environment include heating, electron beam radiation or light lamination